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A Study on Assessing the Role of Financial Literacy in Stock Market Engagement

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Abstract: This article offers the results of an extensive study that examines the many elements that impact individuals' engagement in the stock market. The research investigates the factors contributing to the consistently low rates of involvement in the global equities market, with a specific focus on emerging nations such as India. These factors include consumer financial literacy, risk aversion, financial wellness, regulatory perception, social impact, and investing difficulties. The research uses qualitative interviews and literature review to generate conceptual models that introduce new dimensions of regulatory perception and investment difficulties. These models are subsequently confirmed by quantitative research, drawing upon existing theories. The research provides significant contributions to policymakers, regulators, and investors by deepening comprehension of financial decision-making processes and cultivating a more knowledgeable investing environment.

Key words: financial literacy, Risk avoidance, perception social influence Investment, hassles Emerging economies, Equity products Investment behaviour.

Introduction:

This paper offers the results of an extensive investigation that aims to clarify the many factors that impact involvement in the stock market. This study explores the complex relationship between consumer financial literacy, risk aversion factors, financial well-being, regulatory views, social dynamics, and investment-related hassles, and their impact on consumers' decision-making about stock market participation. Although equity-linked products have been extensively studied for their benefits in investment portfolios, the rates of global stock market involvement still fail to meet normative expectations. India is a noteworthy case study that highlights the disproportionately low adoption of equity products, despite its outstanding savings rates and advanced regulatory frameworks. These occurrences have prompted debates in the field of financial literacy, specifically on the inclination towards conventional assets like gold and real estate as opposed to financial instruments. The phenomenon of stock market involvement has been a subject of interest for scholars and policymakers globally. Existing literature has shed light on the connections between different socio-economic conditions and people' propensity to engage in equity transactions. Nevertheless, there is a lack of empirical research that specifically examines developing markets, resulting in substantial gaps in our understanding of the collective impact of these determinants on equity participation. The objective of this study is to address the existing disparity by doing a thorough examination that incorporates these variables within the framework of a developing economy. Furthermore, this study presents two innovative concepts - the perceptions of regulatory effectiveness in the equities sector and the perceived intricacies linked to investment - that have received limited attention in scholarly literature. Enhancing our knowledge of financial behaviours necessitates the examination of investor trust in regulatory control and the study of how investment-related difficulties impact decision-making. The research employs a rigorous methodological framework, which involves conducting qualitative investigations through interviews with industry experts and investors during Phase 1. Subsequently, in Phase 2, quantitative analysis is conducted to validate conceptual models that have been created from the qualitative findings. This research aims to provide detailed insights into the factors that influence stock market involvement, using well-established theoretical frameworks such as the Theory of Planned Behaviour and Consumer Socialisation Theory. By doing so, it seeks to contribute to the wider conversation on financial decision-making.

Background of the concept

Extensive scholarly literature exists about the diverse factors that influence investors' decision-making processes regarding savings and investments. To start, we will have a clear understanding of our main concepts before determining the elements that influence involvement in the stock market.
Participation in the stock market

Participation in the stock market is a significant economic result. Not engaging in the stock market might result in significant welfare loss. This is because the exposure to stocks, and hence the equity premium, can play a crucial role in determining the long-term return on individual savings (Cocco et al., 2005). However, it is important to note that there exists significant disparity in stock market engagement across individuals, even within Western societies. It is worth mentioning that a considerable number of families do not possess any equities all (Campbell, 2006; Guiso et al., 2008).

While the measurement of stock market involvement pertains to an investor's investment in the stock market, it is crucial to consider the extent of equities holding in an investor's portfolio as a significant consequence. An investor who possesses a minimal amount of equity is unlikely to experience the advantages associated with investing in stocks. The focus of our research revolves around the inclination to engage in stock market investments, whether through direct involvement with stock brokers or indirectly through mutual funds. Additionally, we examine the extent of equities holdings, both direct and indirect, within an investor's savings portfolio.
The inclination to allocate funds towards equities products

"Intentions are believed to encompass the motivational elements that impact a behaviour and to indicate the level of effort individuals are willing to exert to carry out the behaviour" (Ajzen, 1991, p. 181). Ajzen (1991) posits that there exists a positive correlation between the level of intention to engage in an activity and the likelihood of its subsequent performance.

Therefore, intention might be seen as a prognosticator of conduct. Multiple studies have included Investment Intention as a dependent variable to assess the intention to invest in financial goods (Dey et al., 2015; Kozup et al., 2008; Lim et al., 2013). Based on Ajzen's (1991) Theory of Planned Behaviour, intentions come before actual equity ownership in our study. The idea of product knowledge holds significant importance in the field of information processing and decision-making research, as highlighted by Bruncks (1985) and Raju et al. (1995). Within the realm of financial goods, the concept commonly denoted as Financial Literacy, also known as Financial Numeracy, is commonly employed (Huhmann and McQuitty, 2009). The concept of Financial Literacy has been subject to diverse interpretations by scholars throughout the years, ranging from expansive definitions to more precise ones. According to Mandell (2006), Financial Literacy refers to the knowledge and skills that individuals need to possess in order to make informed and prudent financial choices that align with their own

interests. Financial Literacy, as described by Lusardi et al. (2011), encompasses a comprehensive understanding of fundamental financial investing principles, including inflation and risk diversification, as well as the ability to do calculations pertaining to interest rates. In the context of this study, Financial Literacy is being defined as the comprehension and awareness of individual financial principles.
The source was obtained from the Cornell University Library. The measurement of the HRS (Health and Retirement Study) and the RAND1 American Life Panel is now underway at 10:00 on May 27, 2017 (PT).

OBJECTIVE: The main aim of this research is to examine the many elements that impact individuals' engagement in the stock market, specifically focusing on consumer financial literacy, risk avoidance, financial wellness, regulatory perception, social influence, and investing difficulties. The primary objective of this study is to:

1. To know the relational ship between financial literacy and stock market engagement.

Literature Review:

There is a limited number of surveys available that offer comprehensive data on financial literacy and factors associated with financial decision-making, such as saving, portfolio selection, and retirement planning. Lusardi and Mitchell (2006) developed a module on financial literacy for the 2004 US Health and Retirement Study (HRS) in order to address the insufficient data. The inquiries were designed to assess fundamental financial understanding pertaining to the mechanisms of interest compounding, the impacts of inflation, and the practice of risk diversification. Financial illiteracy is prevalent and especially severe among certain demographic groups, including women, the elderly, and individuals with less education. The results are unexpected due to the simplicity and basicity of the literacy questions, as well as the fact that the sample consisted of respondents aged 50 or above. A significant proportion of participants within that particular age cohort possess checking accounts, credit cards, and have obtained one or two mortgages. Nevertheless, comparable findings can be observed in the research conducted by Hilgert and Hogarth (2002), which investigates financial literacy across various age cohorts, as well as in surveys conducted by the National Council on Economic Education (NCEE), which assess financial literacy among high school students and the adult populace. Studies on smaller samples or specific segments of the population have also shown findings of pervasive illiteracy (Agnew and Szykman (2005), Bernheim (1995, 1998), Mandell (2004), and Moore (2003)).
Although these studies mostly examine data from the United States, polls conducted in other nations provide comparable outcomes. The evidence on financial literacy across countries is examined in a study conducted by the OECD (2005) and the research conducted by Lusardi and Mitchell (2007b). These studies reveal that financial illiteracy is a prevalent characteristic observed in several industrialised nations, such as European countries, Australia, and Japan. The research conducted by Christelis, Jappelli, and Padula (2007) supports these findings, since it utilises data that closely resembles the US Human Resource Survey (HRS). Their study reveals that a majority of participants in Europe have poor scores on numeracy measures.
The lack of financial literacy has significant ramifications for household conduct. Bernheim (1995, 1998) was the initial scholar to highlight the fact that a significant number of households are unable to engage in fundamental financial computations and possess little financial literacy. Additionally, Bernheim observed that the saving habits of numerous families are mostly influenced by rudimentary heuristics. Recent studies conducted by Bernheim, Garrett, and Maki (2001) and Bernheim and Garrett (2003) demonstrate that individuals who received financial education throughout their high school years or in their professional environment tend to save a greater amount of money. Lusardi and Mitchell (2006, 2007a) demonstrate that individuals with low literacy are less inclined to engage in retirement planning, leading to a much lower accumulation of wealth (also refer to Hilgert, Hogarth, and Beverly, 2003). The aforementioned observation is substantiated in the research conducted by Stango and

Zinman (2007), wherein it is demonstrated that individuals who lack the ability to accurately compute interest rates based on a series of payments tend to engage in higher levels of borrowing and accumulate lesser quantities of wealth. According to Agarwal, Driscoll, Gabaix, and Laibson (2007), there is a notable prevalence of financial errors among those belonging to the younger and older age groups, who tend to have a lower level of financial literacy.

The financial literacy metrics employed in current research are frequently rudimentary. Lusardi and Mitchell (2006, 2007a) employ a limited set of three questions to assess financial literacy, while Stango and Zinman (2007) utilise a single question for this purpose. In addition, it is worth noting that surveys that offer comprehensive insights into financial literacy frequently lack substantial data pertaining to wealth, saving, and other significant economic indicators. This is exemplified by the NCEE survey, among others. This work addresses the limitations of prior research by presenting complete metrics for assessing financial literacy and conducting an examination of the reliability and validity of the literacy data. Furthermore, we establish a connection between financial literacy and a significant economic result: engagement in the stock market. Despite the presence of comprehensive study on this subject, it remains perplexing why a significant number of families do not possess stocks (Campbell (2006)). Several scholars have posited that the limited number of households holding stocks can be attributed to variables such as short sale limits, income risk, inertia, and deviations from projected utility maximisation (Haliassos and Bertaut, 1995). However, it has been challenging to include all of these aspects into the existing micro data sets. Some individuals have said that young individuals lack the ability to borrow, resulting in a lack of financial resources to invest in equities (Constantinides, Donaldson, & Mehra, 2002). The absence of stock ownership may be partially attributed to life-cycle concerns and the interplay between borrowing and lending rates (Davis, Kubler, & Willen, 2006). However, it is important to note that these factors alone do not offer a comprehensive explanation for the significant number of families that do not possess stocks. Additional factors, such as trust and culture (Guiso, Sapienza and Zingales (2005)), as well as the impact of neighbours and peers (Hong, Kubik and Stein (2004), and Brown, Ivkovich, Smith, and Weisbenner (2007)), have been included in more recent studies. However, it has been observed by other scholars that there is a growing recognition of the impact of poor numeracy and cognitive capacity (Christelis, Jappelli, & Padula, 2007), insufficient knowledge of assets (Guiso & Jappelli, 2005), and a lack of financial acumen (Kimball & Shumway, 2006). Our study significantly enhances previous research by including more sophisticated measures of financial literacy and financial sophistication that we have specifically developed for a survey conducted among Dutch families. Furthermore, in order to get a deeper comprehension of the correlation between financial literacy and engagement in the stock market, we have formulated inquiries aimed at assessing individuals' economic understanding prior to their involvement in the stock market.

Research Methodology: The methodology of the study is established on the primary & also as secondary data. The primary data is
collected through online surveys using a google questionnaire. The 100 respondents were residents. The questionnaire was a structured one with a five-point Likert scale ranging from 1 for Strongly disagree to 5 for Strongly agree. The secondary data are collected from research papers, articles, websites, etc. The study depends mainly on the first data collected through a structured questionnaire. Convenience sampling method was adopted to select the respondents. There is no discrimination on the basis of Income, Age or Gender. The study is based on descriptive research design.

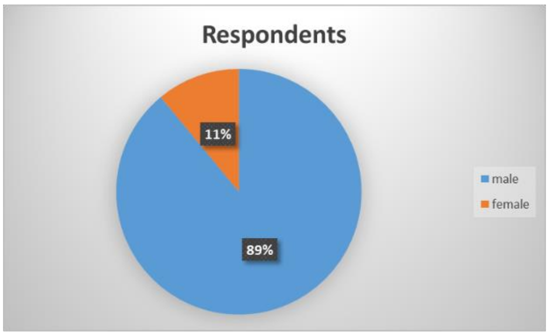
Data Analysis and Interpretation: We compile the entirety of the data pertaining to financial literacy derived from our two sets of inquiries into a comprehensive financial literacy index. The available information is initially consolidated through the implementation of a factor analysis on the sixteen questions within the financial literacy module. In accordance with the methodology employed in formulating the financial literacy inquiries, the variable However, it aligns with another guideline that was previously established regarding student conduct. When uncertain about the answer, people typically respond with "false" to a true-false question. According to the research, there are two primary components that exhibit varying loadings on two distinct types of questions: the basic literacy questions, which consist of the first five questions, and the more complex literacy questions, which include the remaining eleven questions. Consequently, we made the decision to divide the collection of questions into two distinct groups and conduct a factor analysis on each set individually. By employing this approach, we can create two distinct literacy indices: an initial literacy index that pertains to fundamental knowledge (excluding inquiries about the stock market or stocks and bonds), and a subsequent index that assesses more sophisticated financial knowledge, including knowledge about stocks, the stock market, and other financial instruments. When creating the indexes, we specifically consider the distinctions between "incorrect" responses and "do not know" responses. As previously documented by Lusardi and Mitchell (2006), it is crucial to utilise this data in order to distinguish between various levels of financial expertise. Information on the factor analysis may be found.

We provide the distribution of the financial literacy indices across education, age, and gender, in order to verify the accuracy of these two indices and their characteristics. As anticipated, schooling significantly enhances fundamental financial literacy. Individuals with the least proficient understanding of fundamental financial concepts are primarily found at the lowest educational levels, including elementary and preparatory intermediate vocational schools.

On the other hand, those who possess a higher vocational education, which is comparable to a college degree, or a university education, tend to be situated among the upper quartiles of the basic literacy index. The distribution of basic literacy has a hump-shaped pattern in relation to age, however not very evident. Although it is not possible to differentiate between age and cohort effects in a single cross-section, this observation aligns with the findings published by Agarwal, Driscoll, Gabaix, and Laibson (2007). also demonstrates significant disparities in fundamental literacy levels based on gender. Women have much lesser fundamental knowledge compared to males. The results presented in this study align with the findings provided by Lusardi and Mitchell (2006) as well as previous literacy surveys conducted by Lusardi and Mitchell (2007b).

Upon further examination of it becomes evident that there exists a robust correlation between schooling and the acquisition of advanced financial knowledge. A significant proportion (48.3%) of participants who have received primary school fall below the lower literacy. As we progress towards higher literacy levels, there is an observed increase in the percentage of respondents possessing high levels of education. However, even when accounting for individuals with a university degree, only 43.4% of them are advanced literacy. In contrast, the proportion of individuals with basic literacy stands at 70.9%. Hence, it is evident that individuals with a significant level of educational achievement may have a limited understanding of financial matters. This is evidenced by the fact that over 30% of respondents who hold a university degree fall into the lowest two quartiles of the distribution of the advanced literacy score. Therefore, although there is a high correlation, education is not a perfect substitute for financial literacy. Empirical research that uses education may not completely capture the impact of financial understanding.

This particular inquiry possesses the benefit of being straightforward and unambiguous. Furthermore, it fails to address the involvement in the stock market. It is important to acknowledge that the question was positioned at the outset of the literacy module, preceding the inclusion of any questions pertaining to the basic and advanced financial literacy indices. Consequently, participants were required to evaluate their own level of knowledge prior to responding to the literacy inquiries. A crucial inquiry that our study seeks to address pertains not alone to the possession of financial literacy among respondents, but also to the significance of financial literacy in the process of making financial decisions. The initial step involves an examination of the potential impact of literacy on the sources of knowledgeHouseholds seek guidance when making financial decisions, in order to elucidate the impact of literacy on financial behaviour.



Correlation table: - disposable income, Age, Education , stock market engagement

	stock market	*Income*	*Age*	*Education*
stock market	1			
Income	0.18865	1		
Age	-0.36459	-0.13259	1	
Education	-0.03411	0.512437	-0.60824	1

Regression analysis:

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SUMMARY OUTPUT								
Regression Statistics								
Multiple F	0.417266							
R Square	0.174111							
Adjusted I	0.034804							
Standard E	1.747884							
Observati	100							
ANOVA								
	df	*SS*	*MS*	*F*	*Significance F*			
Regressio	14	53.4574	3.818385	49.84015663	2.56725E-11			
Residual	83	253.5732	3.055099					
Total	97	307.0306						
	Coefficients	*tandard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*ower 95.0%*	*pper 95.0%*
Intercept	3.467583	1.060624	3.26938	-0.0015699	1.358044301	5.577122	1.358044	5.577122
Q2	-0.12462	0.103179	-1.20781	-0.23055135	-0.32983952	0.080598	-0.32984	0.080598
Q3	0.056535	0.112462	0.502701	-0.61650572	-0.16714698	0.280216	-0.16715	0.280216
Q4	-0.25686	0.109977	-2.33562	0.000219245	-0.47560542	-0.03812	-0.47561	-0.03812
Q5	-0.0685	0.113961	-0.60104	0.000549448	-0.29516014	0.158169	-0.29516	0.158169
Q6	0.030075	0.117756	0.2554	-0.79904624	-0.20413711	0.264287	-0.20414	0.264287
Q7	-0.04913	0.113534	-0.43276	-0.66631175	-0.27494795	0.176682	-0.27495	0.176682
Q8	-0.08419	0.114761	-0.73358	0.000465269	-0.31244193	0.144068	-0.31244	0.144068
Q9	-0.11908	0.105487	-1.12885	-0.26221536	-0.32888659	0.090731	-0.32889	0.090731
Q10	-0.02719	0.105412	-0.25791	-0.79711486	-0.236846	0.182473	-0.23685	0.182473
Q11	-0.06115	0.116006	-0.5271	0.000599531	-0.29187741	0.169584	-0.29188	0.169584
Q12	0.042064	0.10796	0.389629	-0.69780907	-0.17266442	0.256793	-0.17266	0.256793
Q13	0.100831	0.110853	0.909591	-0.36567201	-0.11965141	0.321313	-0.11965	0.321313
Q14	0.244205	0.115192	2.119971	0.000369948	0.015091547	0.473318	0.015092	0.473318
Q15	-0.11441	0.105946	-1.07986	0.002833335	-0.32512828	0.096316	-0.32513	0.096316

Conclusion:

The objective of this study is to comprehensively investigate the determinants influencing stock market participation, with a specific emphasis on understanding how factors such as consumer financial literacy, risk avoidance, financial wellbeing, regulatory perception, social influence, and investment hassles shape individuals' decisions to engage in the stock market. The study seeks to address the persistent gap between the recognized benefits of equity-linked products in investment portfolios and the observed low levels of global stock market participation. A particular focus is placed on examining the unique challenges and dynamics of stock market engagement within emerging economies, with India serving as a prominent case study. Additionally, the study aims to introduce and operationalize novel constructs, including regulatory perception and investment hassles, to enrich our understanding of stock market participation. By developing conceptual models grounded in established theories and validating them through qualitative interviews, literature review, and quantitative analysis, this research endeavours to provide actionable insights for policymakers, regulators, and investors. Ultimately, the study seeks to contribute to the enhancement of financial literacy, regulatory efficacy, and overall participation in the stock market ecosystem.

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